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REMARKS

The application has been reviewed in light of the Office Action dated October 16, 2007. Claims 1-10 were pending, with unexamined and non-elected claims 8-10 having been withdrawn by the Patent Office from examination. By this Amendment, claims 1 and 5-7 have been amended, claims 8-10 have been canceled, without disclaimer or prejudice to applicant's right to pursue them in one or more divisional applications, and new claims 11-13 have been added. Accordingly, claims 1-7 and 11-13 are now pending, with claims 1 and 11-13 being in independent form.

Claim 5 was objected to as having informalities.

By this Amendment, claim 5 has been amended to correct the informality therein.

Withdrawal of the objection to claim 5 is respectfully requested.

Claims 1-3 were rejected under 35 U.S.C. § 102(b) as purportedly anticipated by U.S. Patent No. 5,130,797 to Murakami et al. Claim 7 was rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Murakami in view of U.S. Patent No. 7,127,117 to Sano.

Applicant has carefully considered the Examiner's comments and the cited art, and respectfully submits that independent claim 1 is patentable over the cited art, for at least the following reasons.

The present application relates to image processing wherein a part of the image processing involves heavy-load operation requiring a longer processing time as compared with other ordinary processing parts.

In an aspect of the improvements devised by applicant for such image processing, an imaging processing apparatus is provided comprising a plurality of heavy-load processing units arranged in parallel with each other, a data distribution unit configured to distribute quantized

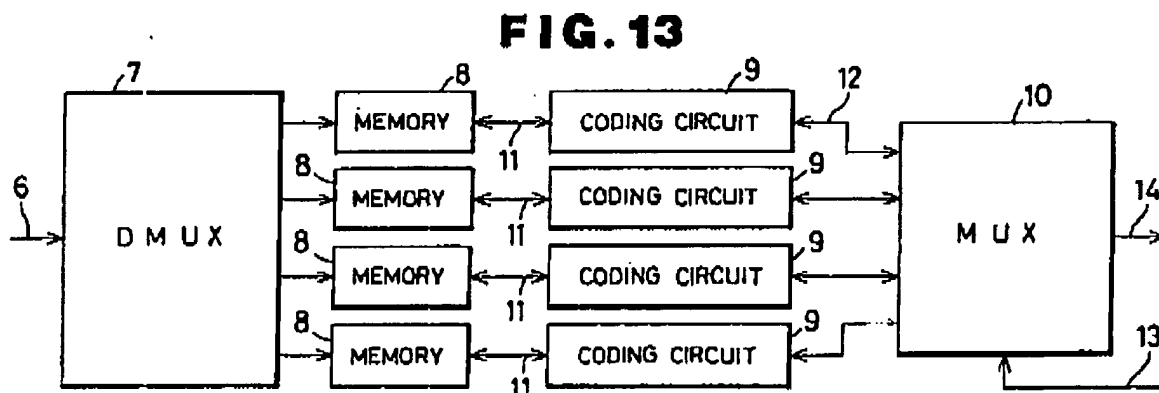
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image-related data to each of the heavy-load processing units, and a data synthesizing unit configured to synthesize multiple data sets output from the heavy-load processing units so as to produce a sequence of heavy-load processed data that is substantially the same as data obtained if a single heavy-load processing unit is employed. Present claim 1 addresses these features.

Murakami, as understood by Applicant, proposes a video codec system wherein sub-sampled video data obtained by sub-sampling video data in units of frames is input by a data control circuit (7) consecutively frame after frame, and the video data is coded in parallel by internal coding circuits (9).

Murakami, Fig. 13 (reproduced below), which was cited in the Office Action, illustrates schematically data flow in the video codec approach proposed by Murakami:



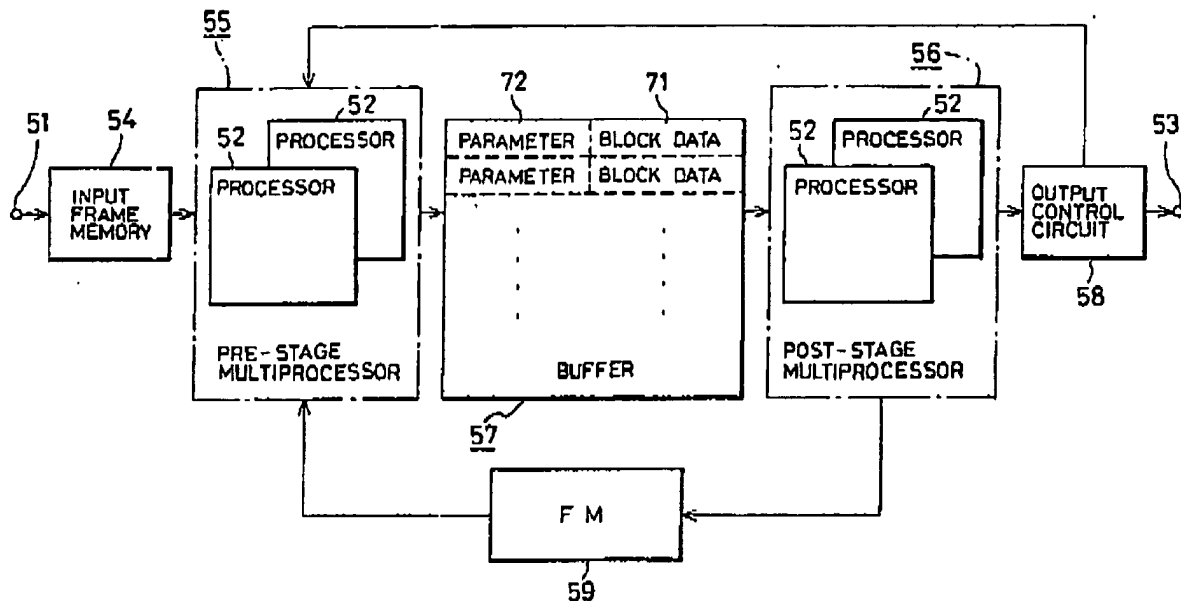
The data control circuit 7 of Murakami is equated in the Office Action with a data distribution unit.

However, the data control circuit 7 of Murakami does not distribute quantized image-related data to each of the heavy-load processing units.

Instead, in Murakami, quantization is performed on data stored in buffer 57 (Fig. 22 of Murakami, reproduced below) which has already undergone the coding shown in Fig. 13.

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FIG. 22

Specifically, Murakami, column 12, lines , and column 13, lines 29-31, states as follows:

Reference numeral 57 is a buffer disposed between the pre-stage multiprocessor 55 and the post-stage multiprocessor 56. The buffer 57 stores the coded data output by the pre-stage multiprocessor 55 and absorbs the difference in processing time between the two multiprocessors 55 and 56. ...

... The block data placed in the buffer 57 is subjected to the *post-stage* process including vector *quantization*, discrete COS transformation and decoding. ...

Thus, frames of unquantized input data are distributed to and coded by plural processors 52 in a pre-stage and then stored in buffer 57, and the coded data stored in buffer 57 is later quantized in a post-stage process.

Applicant does not find disclosure or suggestion in Murakami, however, of a data distribution unit that distributes *quantized* image-related data to each of the heavy-load processing units, as provided by the subject matter of claim 1 of the present application.

Sano, as understood by applicant, proposes an image compression apparatus wherein an

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image dividing section divides an image using into specified rectangular tiles, a bit-plane decomposing section decomposes each of the specified tiles, a bit-plane ordering section orders the bit-planes depending on a coding sequence, a layer forming section forms layers by the ordered bit-planes, and a suppressing section suppresses a quantization rate of a region low relative to other regions of the image.

Sano was cited in the Office Action only against claim 7 as purportedly proposing use of a JPEG2000 compression algorithm.

Applicant does not find teaching or suggestion in the cited art, however, of an image processing apparatus with a heavy-load processing part that carries out a heavy-load operation requiring a longer processing time as compared with other ordinary processing parts, comprising a data distribution unit configured to distribute quantized image-related data to each of a plurality of parallel heavy-load processing units, as provided by the subject matter of claim 1 of the present application.

Accordingly, for at least the above-stated reasons, Applicant respectfully submits that independent claim 1 and the claims depending therefrom are patentable over the cited art.

The Office Action indicated that claims 4-6 were objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11-13 correspond to original claims 4-6 rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, claims 11-13 are submitted to be allowable.

Applicant appreciates the Examiner's statement in the Office Action of reasons for the indication of allowable subject matter, and submits that the present claims recite subject matter

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which further supports patentability for reasons in addition to those identified in the Examiner's statement of reasons for allowance in the Office Action.

In view of the remarks hereinabove, Applicant submits that the application is now in condition for allowance. Accordingly, Applicant earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any fees that are required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,



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